

RECEIVED
CENTRAL FAX CENTER

JAN 16 2007

Atty Docket: 21339-US
Serial No. 10/635,171
Response to Non-Final Action
Page 2 of 8Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (Currently amended) A composition comprising a pair of FRET hybridization probes hybridizing to a target nucleic acid sequence, each of said pair of FRET hybridization probe comprising
 - a nucleotide sequence entity, said nucleotide sequence entity being substantially complementary to a portion of the sequence of the target nucleic acid;
 - a fluorescent entity, said fluorescent entity being either a FRET donor entity or a FRET acceptor entity; and
 - a spacer entity, said spacer entity connecting the nucleotide sequence entity and the fluorescent entity;wherein the FRET hybridization probes hybridize adjacently to each other on the target nucleic acid; and
wherein the spacer entities of the FRET hybridization probes are capable of forming non covalent interactions with each other, wherein said noncovalent interactions consist essentially of A/T base pair interactions.
2. (Canceled).
3. (Canceled).
4. (Original) A composition according to claim 1, wherein said fluorescent entities on said pair of FRET hybridization probes are selected from the group consisting of fluorescein/Cy5, fluorescein/LC Red 640, fluorescein/LC Red 705, and fluorescein/JA286.
5. (Original) A composition according to claim 1, wherein said FRET acceptor entity is a Dabcyl or a Black Hole Quencher.
6. (Original) A composition according to claim 1, wherein at least one of the hybridization probes includes a nucleotide having a non-natural base.

Atty Docket: 21339-US
Serial No. 10/635,171
Response to Non-Final Action
Page 3 of 8

7. (Original) A composition according to claim 6, wherein the non-natural base is selected from the group consisting of a 7-deazapurine, a diamino purine and a C-nucleotide.
8. (Original) A composition according to claim 1, wherein at least one of the hybridization probes includes a modified sugar-phosphate backbone.
9. (Original) A composition according to claim 8, wherein the modified sugar-phosphate backbone includes a 2-O methyl group or a phosphothioate.
10. (Original) A composition according to claim 1, wherein one of the hybridization probes is labeled at the 3' terminal end and the other of the hybridization probes is labeled at the 5' terminal end, such that upon hybridization of the probes to the target nucleic acid and excitation of the FRET donor entity, fluorescent resonance energy transfer to the FRET acceptor entity can occur.
11. (Canceled).
12. (Canceled).
13. (Canceled).
14. (Original) A composition according to claim 1, wherein said spacer entity is branched.
15. (Previously amended) A kit for use in performing a template dependent nucleic acid amplification reaction, comprising:
a composition comprising a pair of FRET hybridization probes according to claim 1; at least one other component selected from the group consisting of nucleic acid amplification primers, a template dependent nucleic acid polymerase, deoxynucleoside triphosphates and a buffer suitable for use in a template dependent nucleic acid amplification reaction; and a container.
- 16-26. (Canceled).

Atty Docket: 21339-US
Serial No. 10/635,171
Response to Non-Final Action
Page 4 of 8

27. (Previously amended) A reaction mixture for use in a dependent nucleic acid amplification reaction, comprising, in a solution:
- a composition comprising a pair of FRET hybridization probes according to claim 1; and
- at least one other component selected from the group consisting of nucleic acid amplification primers, a template dependent nucleic acid polymerase, deoxynucleoside triphosphates and a buffer suitable for use in a template dependent nucleic acid amplification reaction.